

Application No. 10/693,199

REMARKS

Claims 1-20 are all the claims pending in the present application.

Claim 1 has been amended to clarify that the acid-labile moiety has a low activation energy of less than about 20 kcal/mol and is cleavable at room temperature (for example, see page 11, lines 16-19 of the specification).

Claims 1-20 stand rejected on prior art grounds.

Reconsideration of the Examiner's prior art rejections is respectfully requested based on the following discussion.

I. The 35 U.S.C. §102(b) Rejection based on Nakajima et al.

Claims 1-4 and 7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Nakajima et al. (JP 11-302382 in view of its English Language translation).

The present invention is directed to a resist composition, including, among other things, an acid-sensitive imaging polymer wherein the imaging polymer comprises a silsesquioxane backbone and a solubility inhibiting pendant acid-labile moiety having a low activation energy less than about 20 kcal/mol for acid-catalyzed cleaving, wherein the acid-labile moiety is cleavable at room temperature and wherein at least a portion of said imaging polymer is fluorinated resist, and more specifically wherein the imaging polymer comprises a combination of at least monomeric units (II) or (III) having the group R⁴ which consists of a fluorine atom, a fluorinated linear alkyl, fluorinated branched alkyl, a fluorocycloalkyl, a fluoroaryl, or any combination thereof.

Nakajima et al. (also see related patent US 6,309,796 to Nakashima et al.) fails to teach an acid-labile moiety having low-activation energy less than less than about 20 kcal/mol for acid-catalyzed cleaving, and wherein the acid-labile moiety is cleavable at room temperature.

Applicants submit that Nakajima et al. fails to teach each and every aspect of the present invention as recited in claim 1, and therefore claim 1 is patentably distinct from Nakajima et al. Claims 2-4 and 7 are similarly patentable by virtue

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of their dependence on claim 1. Thus, Applicants respectfully request that these rejections be reconsidered and withdrawn.

II. The 35 U.S.C. §103(a) Rejection based on Nakajima et al.

Claims 5, 6 and 8-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Nakajima et al.

As understood, Nakajima et al. discloses Z' of formula (1) wherein the hydrogen atom on a carbon atom may be replaced by a halogen, such as F, Cl and Br. The Office action alleges that Nakajima et al. teaches that the solubility inhibiting group and/or the solubility promoting group may contain a halogen atom, and therefore it would be obvious to one of ordinary skill in the art to add a fluorine atom as the halogen atom, with reasonable expectation of achieving a material having increased stability.

As discussed above, Nakajima et al. fails to teach or suggest an acid-labile moiety having low-activation energy less than about 20 kcal/mol, and that is cleavable at room temperature. Furthermore, Nakajima et al. fails to teach or suggest that a fluorinated resist is required to achieve improved transparency at wavelengths at or below 193 nm with minimized image blurring (page 7, lines 2-5), and more specifically fails to teach or suggest an imaging polymer comprising a combination of at least monomeric units (II) or (III) having the group R⁴ which consists of a fluorine atom, a fluorinated linear alkyl, fluorinated branched alkyl, a fluorocycloalkyl, a fluoroaryl, or any combination thereof.

Applicants submit that Nakajima et al. fails to teach or suggest each and every aspect of the present invention as recited in claim 1. Thus, Applicants submit that claims 5, 6 and 8-20 are similarly patentable by virtue of their dependence on claim 1. Thus, Applicants respectfully request that these rejections be reconsidered and withdrawn.


CONCLUSION

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In view of the foregoing, Applicants submit that claims 1-20, all the claims currently being examined in the application, are patentably distinct from the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time. Should the Examiner find the application to be other than in condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below to discuss any other changes deemed necessary. The Commissioner is authorized to charge any additional fees due or credit overpayments to Deposit Account No. 09-0458.

Applicants' undersigned attorney may be reached by telephone at (845) 894-6919. All correspondence should continue to be directed to the address listed below.

Respectfully submitted,

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Todd M. C. Li

Registration No. 45,554

INTERNATIONAL BUSINESS MACHINES CORPORATION

Intellectual Property Law Department, Zip 482

2070 Route 52

Hopewell Junction, New York 12533

Facsimile: (845) 892-6363